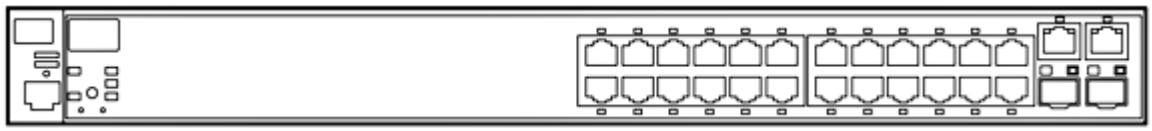
Overview



Models

ProCurve Switch 2610-48-PWR	J9089A
ProCurve Switch 2610-48	J9088A
ProCurve Switch 2610-24-PWR	J9087A
ProCurve Switch 2610-24/12PWR	J9086A
ProCurve Switch 2610-24	J9085A

Introduction

The ProCurve Switch 2610 Series consists of five switches—the 2610-24 and 2610-48 provide 24 and 48 ports of 10/100 connectivity. The 2610-24 is fanless, ensuring quiet operation and making it ideal for deployment in open spaces. The 2610-24/12PWR, 2610-24-PWR, and 2610-48-PWR are IEEE 802.3af-compliant for Power over Ethernet(PoE) and provide up to 15.4 W for 12, 24, and 48 ports. The 2610-24/12PWR has 24 10/100 ports and provides 12 ports of PoE. All switches include two 10/100/1000Base-T ports and two mini-GBIC slots for Gigabit uplink connectivity. An optional redundant external power supply is also available to provide redundancy in the event of a power supply failure. With static routing, robust security and management features, free lifetime warranty, and free software updates, the 2610 series is a cost-effective solution for customers who are building converged enterprise edge networks.

Features and Benefits

Connectivity

- IEEE 802.3af Power over Ethernet: provides up to 15.4 W per port to IEEE 802.3af compliant PoE powered devices such as IP phones, wireless access points, and security cameras
- Pre-standard PoE support: detects and provides power to pre-standard PoE devices; see list of supported devices in the product FAQ at: www.procurve.com
- Gigabit Uplink Connectivity: two 10/100/1000BASE-T ports and two mini-GBIC ports for Connectivity such as Gigabit (SX, LX, LH, 1000BaseT) and 100Base-FX
- ProCurve Auto-MDIX: automatically adjusts for straight-through or crossover cables on all 10/100 ports
- Jumbo packet support: supports up to 9,216 byte frame size to improve performance of large data transfers

Resiliency and high availability

- IEEE 802.3ad Link Aggregation Protocol (LACP) and ProCurve trunking: support up to 24 trunks, each with up to 8 links (ports) per trunk
- IEEE 802.1s Multiple Spanning Tree: provides high link availability in multiple VLAN environments by allowing multiple spanning trees; provides legacy support for IEEE 802.1d and IEEE 802.1w
- Optional redundant power supply: provides uninterrupted power (provided by ProCurve 600 RPS/EPS)

Layer 2 switching

Overview

- VLAN support and tagging: supports the IEEE 802.1Q (4,096 VLAN IDs) and 256 VLANs simultaneously
- GARP VLAN Registration Protocol: allows automatic learning and dynamic assignment of VLANs

Layer 3 routing

- Basic IP routing: enables automatic routing to the connected VLANs and up to 16 static routes--including one default route--in IP networks

Security

- Multiple user authentication methods:
  - IEEE 802.1X: industry-standard way of user authentication using an IEEE 802.1X supplicant on the client in conjunction with a RADIUS server
  - Web-based authentication: similar to IEEE 802.1X, provides a browser-based environment to authenticate clients that do not support the IEEE 802.1X supplicant
  - MAC-based authentication: client is authenticated with the RADIUS server based on client's MAC address
- Authentication flexibility:
  - Multiple IEEE 802.1X users per port: provides authentication of up to 8 IEEE 802.1X users per port; prevents user "piggybacking" on another user's IEEE 802.1X authentication
  - Concurrent IEEE 802.1X and Web or MAC authentication schemes per port: switch port will accept any of IEEE 802.1X and either Web or MAC authentications
- ICMP throttling: defeats ICMP denial-of-service attacks by throttling of ICMP traffic on the switch
- Access control lists (ACLs): provide IP Layer 3 filtering based on source/destination IP address/subnet and source/destination TCP/UDP port number
- Identity-driven ACL: enables implementation of a highly granular and flexible access security policy specific to each authenticated network user
- Port security: allows access only to specified MAC addresses, which can be learned or specified by the administrator
- MAC address lockout: prevents configured particular MAC addresses from connecting to the network
- Source-port filtering: allows only specified ports to communicate with each other
- TACACS+: eases switch management security administration by using a password authentication server
- Secure Shell (SSHv2): encrypts all transmitted data for secure, remote command-line interface (CLI) access over IP networks
- Port monitoring for network threats: Provides sampled port traffic using sFlow technology to the ProCurve Network Immunity Manager application for Network Behavior Anomaly Detection (NBAD) analysis to detect threats and mitigate threats at the port where the threat originated
- Secure Sockets Layer (SSL): encrypts all HTTP traffic, allowing secure access to the browser-based management GUI in the switch
- Secure FTP: allows secure file transfer to/from the switch; protects against unwanted file downloads or unauthorized copying of switch configuration file
- Switch management logon security: can require either RADIUS or TACACS+ authentication for secure switch CLI logon
- Dynamic IP lockdown: works with DHCP protection to block traffic from unauthorized host, preventing IP source address spoofing
- Dynamic ARP protection: blocks ARP broadcasts from unauthorized hosts, preventing eavesdropping or theft of network data
- DHCP protection: blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks
- BPDU port protection: blocks Bridge Protocol Data Units (BPDU) on ports that do not require BPDUs, preventing forged BPDU attacks
- STP Root Guard: protects root bridge from malicious attack or configuration mistakes

Convergence

- IEEE 802.1AB Link Layer Discovery Protocol (LLDP): automated device discovery protocol for easy mapping by network management applicationsLLDP-MED (Media Endpoint Discovery): a standard extension of LLDP that stores values for parameters such as QoS and VLAN to automatically configure network devices such as IP phones
- IP multicast snooping and data-driven IGMP: automatically prevents flooding of IP multicast traffic

Overview

Quality of Service (QoS)

- Class of Service (CoS): sets the IEEE 802.1p priority tag based on IP address, IP Type of Service (ToS), L3 protocol, TCP/UDP port number, source port, and DiffServ
- Layer 4 prioritization: enables prioritization based on TCP/UDP port numbers
- Traffic prioritization (IEEE 802.1p): allows real-time traffic classification into 8 priority levels mapped to 4 queues

Manageability

- RMON, XRMON, and sFlow: provide advanced monitoring and reporting capabilities for statistics, history, alarms, and events
- Friendly port names: allow assignment of descriptive names to ports
- Uni-Directional Link Detection (UDLD): monitors a link between two switches and blocks the ports on both ends of the link if the link goes down at any point between the two devices
- Stacking capability: single IP address management for a virtual stack of up to 16 switches, including the ProCurve 2500 series, 2510 series, 2600 series, 2610 series, 2810 series, 2900 series, 3400cl series, 3500l series, 4200vl series, 6108, 6200yl-24G-mGBIC, and 6400cl series
- Find-Fix-and-Inform: finds and fixes common network problems automatically, then informs administrator
- Troubleshooting: ingress/egress port monitoring enables network problem-solving
- Multiple configuration files: allow multiple config files to be stored to flash image
- Dual flash images: provides independent primary and secondary OS files for backup while upgrading
- Software updates: free downloads from the Web Monitor and diagnostics
- Port mirroring: enables traffic on a port to be simultaneously sent to a network analyzer for monitoring Industry-leading warranty
- Lifetime warranty: for as long as you own the product, with next-business-day advance replacement (available in most countries)

ProCurve Switch 2610-48-PWR (J9089A)	**Ports**	48 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full		
		1 RJ-45 serial console port		
		2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only		
		2 open mini-GBIC (SFP) slots		
	Physical characteristics	**Dimensions** (D x W x H)	13.5 x 17.4 x 1.73 in. (34.29 x 44.2 x 4.39 cm) (1U height)	
		Weight (fully loaded)	16.7 lb. (7.58 kg)	
	Memory and processor	**Processor type and speed**	MIPS @ 300 MHz	
		Flash capacity	16 MB	
		SDRAM	128 MB SDRAM	
		Packet buffer size	2 MB	
	Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only		
	Performance	**100 Mb Latency**	< 6.2 µs (LIFO)	
		1000 Mb Latency	< 4.4 µs (LIFO)	
		Throughput	up to 13.0 million pps	
		Routing/Switching capacity	17.6 Gbps	
		Routing table size	8,000 entries	
	Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)	
		Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	
		Non-operating/ Storage temperature	-40°F to 158°F (-40°C to 70°C)	
		Non-operating/ Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing	
		Alitude	up to 10000 ft. (3 km)	
		Acoustic	**Power**	59 dB
			Pressure	53.2 dB; DIN 45635T.19 per ISO 7779
	Electrical characteristics	**Maximum heat dissipation**	410 BTU/hr (432.55 kJ/hr), (Switch only BTU/hr - 410, combined switch + maxPoE devices at 15.4 W - 2281 BTU/hr)	
		Voltage	100-127 / 200-240 VAC	
		Current	7.0 / 3.5 A	
		Power consumption	96 W	
		Frequency	50 / 60 Hz	
		NOTE: Power Consumption - 96 W without PoE; 590 W with PoE		
	Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950		

Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	EN	EN 55024, CISPR 24
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD
	Radiated	IEC 61000-4-3; 3V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3V
	Power frequency magnetic field	IEC 61000-4-8; 1A/m,50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	
Standards and protocols	Device Management HTML and telnet management General Protocols IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP RFC 1542 BOOTP Extensions RFC 2030 Simple Network Time Protocol (SNTP) v4 RFC 2131 DHCP RFC 3046 DHCP Relay Agent Information Option IP Multicast RFC 3376 IGMPv3 MIBs RFC 1213 MIB II RFC 1493 Bridge MIB RFC 2021 RMONv2 MIB RFC 2096 IP Forwarding Table MIB RFC 2613 SMON MIB RFC 2618 RADIUS Client MIB RFC 2665 Ethernet-Like-MIB	

RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)
RFC 2863 The Interfaces Group MIB
Network Management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 3164 BSD syslog Protocol
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3
Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

ProCurve Switch 2610-48 (J9088A)	Ports	48 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full	
		1 RJ-45 serial console port	
		2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	
		2 open mini-GBIC (SFP) slots	
	Physical characteristics	Dimensions (D x W x H)	9.3(d) x 17.4(w) x 1.73(h) in. (23.62 x 44.2 x 4.39 cm) (1U height)
		Weight (fully loaded)	10.75 lb. (4.88 kg)
	Memory and processor	Processor type and speed	MIPS @ 300 MHz
		Flash capacity	16 MB
		SDRAM	128 MB SDRAM
		Packet buffer size	2 MB
	Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	
	Performance	100 Mb Latency	< 6.2 μs (LIFO)
		1000 Mb Latency	< 4.4 μs (LIFO)
		Throughput	up to 13.0 million pps
		Routing/Switching capacity	17.6 Gbps
		Routing table size	8,000 entries
	Environment	Operating temperature	32°F to 122°F (0°C to 50°C)
		Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing
		Non-operating/ Storage temperature	-40°F to 158°F (-40°C to 70°C)
		Non-operating/ Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing

	Alitude	up to 10000 ft. (3 km)	
	Acoustic	Power	45 dB
		Pressure	36.2 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics	Maximum heat dissipation	285 BTU/hr (300.67 kJ/hr)	
	Voltage	100-127 / 200-240 VAC	
	Current	1.3 / 0.8 A	
	Power consumption	66 W	
	Frequency	50 / 60 Hz	
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950		
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A		
Immunity	EN	EN 55024, CISPR 24	
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	
	Radiated	IEC 61000-4-3; 3V/m	
	EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)	
	Surge	IEC 61000-4-5; 1 kV/2 kV AC	
	Conducted	IEC 61000-4-6; 3V	
	Power frequency magnetic field	IEC 61000-4-8; 1A/m, 50 or 60 Hz	
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods	
	Harmonics	EN 61000-3-2, IEC 61000-3-2	
	Flicker	EN 61000-3-3, IEC 61000-3-3	
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)		
Standards and protocols	Device Management HTML and telnet management General Protocols IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP		

RFC 1542 BOOTP Extensions
RFC 2030 Simple Network Time Protocol (SNTP) v4
RFC 2131 DHCP
RFC 3046 DHCP Relay Agent Information Option

IP Multicast
RFC 3376 IGMPv3

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
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Network Management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 3164 BSD syslog Protocol
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3

Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

ProCurve Switch 2610-24-PWR (J9087A)	**Ports**	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full	
		1 RJ-45 serial console port	
		2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only	
		2 open mini-GBIC (SFP) slots	
	Physical characteristics	**Dimensions** (D x W x H)	12.5(d) x 17.4(w) x 1.73(h) in. (31.75 x 44.2 x 4.39 cm) (1U height)
		Weight (fully loaded)	15.05 lb. (6.83 kg), Fully loaded
	Memory and processor	**Processor type and speed**	MIPS @ 300 MHz
		Flash capacity	16 MB
		SDRAM	128 MB SDRAM
		Packet buffer size	1 MB
	Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only	
	Performance	**100 Mb Latency**	< 4.1 μs (LIFO)
		1000 Mb Latency	< 2.9 μs (LIFO)

	Throughput	up to 9.5 million pps	
	Routing/Switching capacity	12.8 Gbps	
	Routing table size	8,000 entries	
Environment	Operating temperature	32°F to 122°F (0°C to 50°C)	
	Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	
	Non-operating/ Storage temperature	-40°F to 158°F (-40°C to 70°C)	
	Non-operating/ Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing	
	Alitude	up to 10000 ft. (3 km)	
	Acoustic	Power	62 dB
		Pressure	53 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics	Maximum heat dissipation	410 BTU/hr (432.55 kJ/hr), (Switch only BTU/hr - 410, combined switch + maxPoE devices at 15.4 W - 2281 BTU/hr)	
	Voltage	100-127 / 200-240 VAC	
	Current	7.0 / 3.5 A	
	Power consumption	77 W	
	Frequency	50 / 60 Hz	
	NOTE: Power Consumption - 77 W without PoE; 527 W with PoE		
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950		
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A		
Immunity	EN	EN 55024, CISPR 24	
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	
	Radiated	IEC 61000-4-3; 3V/m	
	EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)	
	Surge	IEC 61000-4-5; 1 kV/2 kV AC	
	Conducted	IEC 61000-4-6; 3V	
	Power frequency magnetic field	IEC 61000-4-8; 1A/m, 50 or 60 Hz	
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods	
	Harmonics	EN 61000-3-2, IEC 61000-3-2	
	Flicker	EN 61000-3-3, IEC 61000-3-3	
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)		
Standards and protocols	Device Management HTML and telnet management		

General Protocols
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IEEE 802.1p Priority
IEEE 802.1Q VLANs
IEEE 802.1v VLAN classification by Protocol and Port
IEEE 802.1w Rapid Reconfiguration of Spanning Tree
IEEE 802.3ad Link Aggregation Control Protocol (LACP)
IEEE 802.3af Power over Ethernet
IEEE 802.3x Flow Control
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ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3
Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

ProCurve Switch 2610-24/12PWR (J9086A)	Ports	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full 1 RJ-45 serial console port

	2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only		
	2 open mini-GBIC (SFP) slots		
Physical characteristics	Dimensions (D x W x H)	9.3 x 17.4 x 1.73 in. (23.62 x 44.2 x 4.39 cm) (1U height)	
	Weight (fully loaded)	7.5 lb. (3.4 kg)	
Memory and processor	Processor type and speed	MIPS @ 300 MHz	
	Flash capacity	16 MB	
	SDRAM	128 MB SDRAM	
	Packet buffer size	1 MB	
Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only		
Performance	100 Mb Latency	< 4.1 µs	
	1000 Mb Latency	< 2.9 µs	
	Throughput	up to 9.5 million pps	
	Routing/Switching capacity	12.8 Gbps	
	Routing table size	8,000 entries	
Environment	Operating temperature	32°F to 122°F (0°C to 50°C)	
	Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	
	Non-operating/ Storage temperature	-40°F to 158°F (-40°C to 70°C)	
	Non-operating/ Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing	
	Alitude	up to 10000 ft. (3 km)	
	Acoustic	Power	46 dB
		Pressure	38.4 dB; DIN 45635T.19 per ISO 7779
Electrical characteristics	Maximum heat dissipation	181 BTU/hr (190.96 kJ/hr), (Switch only BTU/hr - 181, combined switch + maxPoE devices at 15.4 W - 827 BTU/hr)	
	Voltage	100-127 / 200-240 VAC	
	Current	3.3 / 1.7 A	
	Power consumption	62 W	
	Frequency	50 / 60 Hz	
	NOTE: Power Consumption - 62 W without PoE; 189 W with PoE		
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950		
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A		
Immunity	EN	EN 55024, CISPR 24	
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD	

	Radiated	IEC 61000-4-3; 3V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3V
	Power frequency magnetic field	IEC 61000-4-8; 1A/m,50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	

Standards and protocols

Device Management
HTML and telnet management

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		RFC 3164 BSD syslog Protocol		
		RFC 3176 sFlow		
		ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)		
		SNMPv1/v2c/v3		
		Security		
		IEEE 802.1X Port Based Network Access Control		
		RFC 1492 TACACS+		
		Secure Sockets Layer (SSL)		
		SSHv1/SSHv2 Secure Shell		
ProCurve Switch 2610-24 (J9085A)	**Ports**	24 auto-sensing 10/100 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX); Media Type: Auto-MDIX; Duplex: half or full		
		1 RJ-45 serial console port		
		2 auto-sensing 10/100/1000 ports (IEEE 802.3 Type 10Base-T, IEEE 802.3u Type 100Base-TX, IEEE 802.3ab Type 1000Base-T); Duplex: 10Base-T/100Base-TX: half or full; 1000Base-T: full only		
		2 open mini-GBIC (SFP) slots		
	Physical characteristics	**Dimensions** (D x W x H)	9.3 x 17.4 x 1.73 in. (23.62 x 44.2 x 4.39 cm) (1U height)	
		Weight (fully loaded)	10.2 lb. (4.63 kg)	
	Memory and processor	**Processor type and speed**	MIPS @ 300 MHz	
		Flash capacity	16 MB	
		SDRAM	128 MB SDRAM	
		Packet buffer size	1 MB	
	Mounting	Mounts in an EIA-standard 19 in. telco rack or equipment cabinet (hardware included); horizontal surface mounting only		
	Performance	**100 Mb Latency**	< 4.1 μs (LIFO)	
		1000 Mb Latency	< 2.9 μs (LIFO)	
		Throughput	up to 9.5 million pps	
		Routing/Switching capacity	12.8 Gbps	
		Routing table size	8,000 entries	
	Environment	**Operating temperature**	32°F to 122°F (0°C to 50°C)	
		Operating relative humidity	15% to 95% @ 104°F (40°C), non-condensing	
		Non-operating/ Storage temperature	-40°F to 158°F (-40°C to 70°C)	
		Non-operating/ Storage relative humidity	15% to 90% @ 149°F (65°C), non-condensing	
		Alitude	up to 10000 ft. (3 km)	
		Acoustic	**Power**	62 dB
			Pressure	0 dB No Fan

Electrical characteristics	Maximum heat dissipation	142 BTU/hr (149.81 kJ/hr)
	Voltage	100-127 / 200-240 VAC
	Current	0.8 / 0.4 A
	Power consumption	41 W
	Frequency	50 / 60 Hz
Safety	CSA 22.2 No. 60950; UL 60950; IEC 60950; EN 60950	
Emissions	FCC Class A; VCCI Class A; EN 55022/CISPR 22 Class A	
Immunity	EN	EN 55024, CISPR 24
	ESD	IEC 61000-4-2; 4 kV CD, 8 kV AD
	Radiated	IEC 61000-4-3; 3V/m
	EFT/Burst	IEC 61000-4-4; 1.0 kV(power line), 0.5kV (signal line)
	Surge	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted	IEC 61000-4-6; 3V
	Power frequency magnetic field	IEC 61000-4-8; 1A/m, 50 or 60 Hz
	Voltage dips and interruptions	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics	EN 61000-3-2, IEC 61000-3-2
	Flicker	EN 61000-3-3, IEC 61000-3-3
Management	ProCurve Manager Plus; ProCurve Manager (included); command-line interface; Web browser; configuration menu; out-of-band management (serial RS-232C)	
Standards and protocols	Device Management HTML and telnet management General Protocols IEEE 802.1D MAC Bridges IEEE 802.1p Priority IEEE 802.1Q VLANs IEEE 802.1v VLAN classification by Protocol and Port IEEE 802.1w Rapid Reconfiguration of Spanning Tree IEEE 802.3ad Link Aggregation Control Protocol (LACP) IEEE 802.3af Power over Ethernet IEEE 802.3x Flow Control RFC 768 UDP RFC 783 TFTP Protocol (revision 2) RFC 792 ICMP RFC 793 TCP RFC 826 ARP RFC 854 TELNET RFC 951 BOOTP RFC 1542 BOOTP Extensions RFC 2030 Simple Network Time Protocol (SNTP) v4 RFC 2131 DHCP RFC 3046 DHCP Relay Agent Information Option IP Multicast RFC 3376 IGMPv3	

MIBs
RFC 1213 MIB II
RFC 1493 Bridge MIB
RFC 2021 RMONv2 MIB
RFC 2096 IP Forwarding Table MIB
RFC 2613 SMON MIB
RFC 2618 RADIUS Client MIB
RFC 2665 Ethernet-Like-MIB
RFC 2668 802.3 MAU MIB
RFC 2674 802.1p and IEEE 802.1Q Bridge MIB
RFC 2737 Entity MIB (Version 2)
RFC 2863 The Interfaces Group MIB
Network Management
IEEE 802.1AB Link Layer Discovery Protocol (LLDP)
RFC 3164 BSD syslog Protocol
RFC 3176 sFlow
ANSI/TIA-1057 LLDP Media Endpoint Discovery (LLDP-MED)
SNMPv1/v2c/v3
Security
IEEE 802.1X Port Based Network Access Control
RFC 1492 TACACS+
Secure Sockets Layer (SSL)
SSHv1/SSHv2 Secure Shell

Accessories

ProCurve Gigabit-SX-LC Mini-GBIC (J4858C) A small form factor pluggable (SFP) gigabit SX transceiver that provides a full-duplex gigabit solution up to 550 meters on multimode fiber.	**Ports**	1 LC 1000Base-SX port (IEEE 802.3z Type 1000Base-SX) Duplex: full only
	Physical characteristics	Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm) Weight: 0.04 lb. (0.02 kg)
	Cabling	Type: • 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively Maximum distance: • 220 m (62.5 µm core diameter, 160 MHz*km bandwidth • 275 m (62.5 µm core diameter, 200 MHz*km bandwidth • 500 m (50 µm core diameter, 400 MHz*km bandwidth) • 550 m (50 µm core diameter, 500 MHz*km bandwidth)
ProCurve Gigabit-LX-LC Mini-GBIC (J4859C) A small form factor pluggable (SFP) gigabit LX transceiver that provides a full-duplex gigabit solution up to 10 km (singlemode) or 550 m (multimode).	**Ports**	1 LC 1000Base-LX port (IEEE 802.3z Type 1000Base-LX) Duplex: full only
	Physical characteristics	Dimensions: 2.24(d) x 0.54(w) x 0.486(h) in. (5.69 x 1.37 x 1.23 cm) Weight: 0.04 lb. (0.02 kg)
	Cabling	Type: Either single mode or multimode • 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively • Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1 Maximum distance: • 10 km (single mode) or 550 m (multimode) NOTE: A mode conditioning patch cord may be needed in some multimode fiber installations.
ProCurve Gigabit-LH-LC Mini-GBIC (J4860C) A small form factor pluggable (SFP) gigabit LH transceiver that provides a full-duplex gigabit solution up to 70 km on singlemode fiber.	**Ports**	1 LC 1000Base-LH port (no IEEE standard exists for 1550 nm optics) Duplex: full only
	Physical characteristics	Dimensions: 2.17(d) x 0.60(w) x 0.46(h) in. (5.5 x 1.53 x 1.18 cm) Weight: 0.04 lb. (0.02 kg)
	Cabling	Type: • Low metal content, single-mode fiber-optic, complying with ITU-T G.652 and ISO/IEC 793-2 Type B1 Maximum distance: • 70 km

Accessories

ProCurve Gigabit 1000Base-T Mini-BIC (J8177B)

A small form-factor pluggable (SFP) gigabit copper transceiver that provides a full-duplex gigabit solution up to 100 meters on Category 5 or better cable.

Ports	1 RJ-45 1000Base-T port (IEEE 802.3ab Type 1000Base-T) Duplex: full only
Physical characteristics	Dimensions: 2.71(d) x 0.54(w) x 0.55(h) in. (6.88 x 1.37 x 1.4 cm) Weight: 0.06 lb. (0.03 kg)
Cabling	Type: 1000Base-T: Category 5 (5E or better recommended), 100 O differential 4-pair unshielded twisted pair (UTP) or shielded twisted pair (STP) balanced, complying with IEEE 802.3ab 1000Base-T Maximum distance: 100 m

NOTE:When used in the ProCurve Switch gl 20-Port 10/100/1000 Module (J4908A), the J8177B mini-GBIC can be installed in either the upper or lower mini-GBIC port, but will block access to the other port.

NOTE: See the document titled: "Support for the J8177B 1000Base-T Mini-GBIC", on the "ProCurve Mini-GBICs and SFPs" Manuals Web page, for supported platforms and minimum software requirements to support this product.

NOTE: The J8177B gigabit copper mini-GBIC is not supported on dual-personality ports.

ProCurve 100-FX SFP-LC Transceiver (J9054B)

A small form-factor pluggable (SFP) 100-FX transceiver that provides 100 Mbps full-duplex connectivity up to 2 km on multimode fiber.

Ports	1 LC 100Base-FX port (IEEE 802.3u Type 100Base-FX) Duplex: half or full	
Physical Characteristics	Dimensions: 2.7(d) x 0.54(w) x 0.48(h)in. (6.86 x 1.38 x 1.22 cm) Weight: 0.06 lb. (0.03 kg)	
Environment	Operating temperature:	32°F to 158°F (0°C to 70°C)
	Operating relative humidity:	5% to 95%
	Non-operating/Storage temperature:	-40°F to 185°F (-40°C to 85°C)
	Non-operating/Storage relative humidity:	5% to 85%
	Altitude:	up to 10,000 ft. (3 km)
Cabling	Type: 62.5/125 µm or 50/125 µm (core/cladding) diameter, graded-index, low metal content, multimode fiber optic, complying with ITU-T G.651 and ISO/IEC 793-2 Type A1b or A1a, respectively Maximum distance: 2 km (full duplex) or 412 m (half duplex)	

NOTE:See the document titled "Support for the J9054B 100-FX SFP-LC Transceiver", on the "ProCurve Mini-GBICs and SFPs" Manuals Web page, for supported platforms and minimum software requirements to support this product.

ProCurve 600 Redundant External Power Supply (J8168A)

The ProCurve 600 Redundant and External Power Supply (RPS/EPS) has 6 RPS ports and 2 EPS ports and supplies backup and Power over Ethernet power.

Ports	6 redundant power supply ports Restrictions: Each port can provide redundant +12 V power to a connected switch; only one port can provide power at a given time 2 external power supply ports Restrictions: Provides +50 VDC external PoE to up to two switch devices; provides max. of 408 W full power to one device, and half power (204 W each) if connected to two devices
Physical characteristics	Dimensions: 12.83(d) x 17.44(w) x 1.73(h) in. (32.59 x 44.3 x 4.39 cm) (1U height) Weight: 11.78 lb. (5.34 kg), Fully loaded
Mounting	1U rack-mountable and wall-mountable enclosure using standard mounting hardware

Accessories

Environment	Operating temperature:	32°F to 131°F (0°C to 55°C)
	Operating relative humidity:	15% to 95% @ 104°F (40°C), non-condensing
	Non-operating/Storage temperature:	-40°F to 158°F (-40°C to 70°C)
	Non-operating/Storage relative humidity:	15% to 95% @ 149°F (65°C), non-condensing
	Altitude:	up to 15000 ft. (4.6 km)
	Acoustic:	Noise emission LwA=59.2 dB at virtual workspace, according to DIN 45635 T.19
Electrical characteristics	Description:	The unit automatically adjusts to any voltage between 100-240 V and either 50 or 60 Hz
	Voltage:	100-240 VAC
	Current:	9 / 5 A
	Power consumption:	800 W
	RPS power:	180 W
	PoE power:	408 W
	Frequency:	50 / 60 Hz
Safety	CSA 22.2 No. 60950 EN 60950/IEC 60950 UL 60950	
Emissions	FCC Class A VCCI Class A EN 55022/CISPR 22 Class A	
Immunity	EN:	EN 55024, CISPR 24
	ESD:	IEC 61000-4-2; 4 kV CD, 8 kV AD
	Radiated:	IEC 61000-4-3; 3 V/m
	EFT/Burst:	IEC 61000-4-4; 1.0 kV (power line), 0.05 kV (signal line)
	Surge:	IEC 61000-4-5; 1 kV/2 kV AC
	Conducted:	IEC 61000-4-6; 3 V
	Power frequency magnetic field:	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
	Voltage dips and interruptions:	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
	Harmonics:	EN 61000-3-2, IEC 61000-3-2
	Flicker:	EN 61000-3-3, IEC 61000-3-3
Management	Provides information via port interfaces of attached devices	

NOTE:
Supported devices

- ProCurve Switch 2600-PWR series, ProCurve Switch 2610 series, ProCurve Switch 2610-PWR series, ProCurve Switch 2800 series, ProCurve Switch 2810 series, ProCurve Switch 5300xl series, ProCurve Switch 3400cl series, ProCurve Switch 6400cl series, ProCurve Secure Router 7000dl series

ProCurve 610 External Power Supply	Ports	4 external power supply ports Restrictions: Provides +50 VDC external PoE power to up to four switch devices; each pair of EPS ports provides max. of

Accessories

(J8169A) The ProCurve 610 External Power Supply (EPS) has 4 EPS ports and provides power to connected Switch xl 10/100-TX PoE modules.		408 W full power to one device, and half power (204 W each) if connected to two devices; total 816 W of power	
	Physical characteristics	Dimensions: 19.02(d) x 17.3(w) x 1.73(h) in. (48.31 x 43.94 x 4.39 cm) (1U height) Weight: 16.44 lb. (7.46 kg), Fully loaded	
	Mounting	1U rack-mountable and wall-mountable enclosure using standard mounting hardware	
	Environment	Operating temperature:	32°F to 122°F (0°C to 50°C)
		Operating relative humidity:	15% to 95% @ 104°F (40°C), non-condensing
		Non-operating/Storage temperature:	-40°F to 158°F (-40°C to 70°C)
		Non-operating/Storage relative humidity:	15% to 95% @ 149°F (65°C), non-condensing
		Altitude:	up to 15000 ft. (4.6 km)
		Acoustic:	Noise emission LwA=58 dB at virtual workspace, according to DIN 45635 T.19
	Electrical characteristics	Description: The unit automatically adjusts to any voltage between 110-240 V and either 50 or 60 Hz Voltage: 110-240 VAC Current: 11 / 6 A Power consumption: 1000 W PoE power: 816 W Frequency: 50 / 60 Hz NOTE: For Japan, the unit only operates at 200 V, 50 Hz, and 6 A.	
	Safety	CSA 22.2 No. 60950 EN 60950/IEC 60950 UL 60950	
	Emissions	FCC Class A VCCI Class A EN 55022/CISPR 22 Class A	
	Immunity	EN:	EN 55024, CISPR 24
		ESD:	IEC 61000-4-2; 4 kV CD, 8 kV AD
		Radiated:	IEC 61000-4-3; 3 V/m
		EFT/Burst:	IEC 61000-4-4; 1.0 kV (power line), 0.5 kV (signal line)
		Surge:	IEC 61000-4-5; 1 kV/2 kV AC
		Conducted:	IEC 61000-4-6; 3 V
		Power frequency magnetic field:	IEC 61000-4-8; 1 A/m, 50 or 60 Hz
		Voltage dips and interruptions:	IEC 61000-4-11; >95% reduction, 0.5 period; 30% reduction, 25 periods
		Harmonics:	EN 61000-3-2, IEC 61000-3-2
		Flicker:	EN 61000-3-3, IEC 61000-3-3
	Management	Unmanaged power supply; provides information via LEDs or through port interfaces of attached devices	
	NOTE: Supported devices: ProCurve Switch 2600-PWR series, ProCurve Switch 2610-PWR series, ProCurve Switch 5300xl series.		

Accessories

ProCurve Manager 2.3 (-) System requirements		For networks having 50 to 250 managed devices, ProCurve recommends the following:
Windows Server-based network management for ProCurve LAN products	**Minimum system hardware**	2.0 GHz Intel Pentium 4 or equivalent processor 2 GB RAM memory 10 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
	Recommended system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
	Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
	For networks having 250 to 2,000 managed devices, ProCurve recommends the following:	
	Minimum system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
	Recommended system hardware	Intel Xeon or equivalent processor 4 GB RAM memory 80 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
	Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
	Browsers	Microsoft Internet Explorer version 5.0 or later
	Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5 (optional)
	Additional requirements	NOTE: ProCurve Network Immunity Manager when loaded on PCM+ 2.3 can sample up to 500 managed ports using sFlow or XRMON.

NOTE:Unlimited license means that ProCurve does not impose a limit on the number of devices attached to the network as a condition of the license. Some degradation in performance may be expected the greater the number of devices attached to the network.
NOTE: Specifications subject to change.

Accessories

ProCurve Identity Driven Manager 2.2 base product--500-user license
(J9012A)

ProCurve Identity Driven Manager is a plug-in to ProCurve Manager Plus that dynamically applies security and performance settings based on user, device, location, time, and client system state -- 500 user license.

System requirements
Please see ProCurve Manager Plus for system requirements.

RADIUS server support
Free RADIUS
Funk Steelbelted RADIUS Server
Microsoft IAS

Features

Intuitive Explorer-style interface
OpenView NNM integration
Application of policies by user identity:

- Auto VLAN assignment
- Auto set quality of service by user
- Auto set bandwidth assignment by user

Rule-based access rights deployment Dynamic rights assignment based on:

- Time
- Location
- User system

Auto-discovery of:

- RADIUS servers
- Realms
- Users

NOTE:The base product for Identity Driven Manager allows for managing up to 500 users. Customers may add users in quantities of 2,000 by purchasing J9014A.

ProCurve Identity Driven Manager 2.2 base product (upgrade from 1.0)
(J9013A)

Identity Driven Manager 2.2 500-user upgrade from 1.0 allows existing 1.0 customers to get the features of 2.0, with a 500-user limitation.

System requirements
Please see ProCurve Manager Plus for system requirements.

RADIUS server support
FreeRADIUS (on Red Hat ES3 or ES4 or SuSe Linux 9)
Funk Steelbelted RADIUS Server
Microsoft IAS

Features

Intuitive Explorer-style interface
OpenView NNM integration
Application of policies by user identity:

- Auto VLAN assignment
- Auto set quality of service by user
- Auto set bandwidth assignment by user

Rule-based access rights deployment Dynamic rights assignment based on:

- Time
- Location
- User system

Auto-discovery of:

- RADIUS servers
- Realms
- Users

NOTE: This upgrade provides Identity Driven Manager 2.0, which allows for managing up to 500 users. Customers may add users in quantities of 2,000 by purchasing J9014A.

ProCurve Identity Driven Manager 2.2 - add 2,000 users license (J9014A) Adds support for 2,000 additional users to the base Identity Driven Manager 2.2 product	**System requirements**	This license adds support for an additional 2,000 users to the IDM base products of J9012A or J9013A
	RADIUS server support	Free RADIUS Funk Steelbelted RADIUS Server Microsoft IAS
	Features	**Intuitive Explorer-style interface** **OpenView NNM integration** **Application of policies by user identity:** • Auto VLAN assignment • Auto set quality of service by user • Auto set bandwidth assignment by user **Rule-based access rights deployment Dynamic rights assignment based on:** • Time • Location • User system **Auto-discovery of:** • RADIUS servers • Realms • Users
ProCurve Network Immunity Manager 1.0 50-device license (J9060A)	ProCurve Network Immunity Manager is a plug-in module for ProCurve Manager Plus 2.2 that provides a rich toolset to manage internal network threat detection and response in a wired and wireless network environment.	
ProCurve Network Immunity Manager 1.0 +100-device license (J9061A)	ProCurve Network Immunity Manager is a plug-in module for ProCurve Manager Plus 2.2 that provides a rich toolset to manage internal network threat detection and response in a wired and wireless network environment.	
ProCurve Network Immunity Manager 1.0 unlimited-device license (J9062A)	ProCurve Network Immunity Manager is a plug-in module for ProCurve Manager Plus 2.2 that provides a rich toolset to manage internal network threat detection and response in a wired and wireless network environment.	

Accessories

ProCurve Manager Plus 2.3 upgrade from PCM+ 1.6 or newer (J9056A)

ProCurve Manager Plus 2.3 50-device upgrade adds new PCM+ 2.2 functionality to previously purchased PCM+ 1.6 or PCM+ 1.5 releases.

System requirements	For networks having 50 to 250 managed devices, ProCurve recommends the following:
Minimum system hardware	2.0 GHz Intel Pentium 4 or equivalent processor 2 GB RAM memory 10 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
For networks having 250 to 2,000 managed devices, ProCurve recommends the following:	
Minimum system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	Intel Xeon or equivalent processor 4 GB RAM memory 80 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
Browsers	Microsoft Internet Explorer version 5.0 or later
Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
Additional requirements	NOTE: ProCurve Network Immunity Manager when loaded on PCM+ 2.3 can sample up to 500 managed ports using sFlow or XRMON.

NOTE:Additional processing power may be necessary for extensive traffic monitoring.
NOTE:Unlimited license means that ProCurve does not impose a limit on the number of devices attached to the network as a condition of the license.
NOTE:Some degradation in performance may be expected the greater the number of devices attached to the network.
NOTE: Specifications subject to change.

Accessories

ProCurve Manager Plus 2.3 50-device license (J9057A)

ProCurve Manager Plus provides a starter license for advanced device management of up to 50 ProCurve devices, including integration with the HP OpenView Network Node Manager product.

System requirements	For networks having 50 to 250 managed devices, ProCurve recommends the following:
Minimum system hardware	2.0 GHz Intel Pentium 4 or equivalent processor 2 GB RAM memory 10 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
For networks having 250 to 2,000 managed devices, ProCurve recommends the following:	
Minimum system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	Intel Xeon or equivalent processor 4 GB RAM memory 80 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
Browsers	Microsoft Internet Explorer version 5.0 or later
Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
Additional requirements	NOTE: ProCurve Network Immunity Manager when loaded on PCM+ 2.3 can sample up to 500 managed ports using sFlow or XRMON.

NOTE:Additional processing power may be necessary for extensive traffic monitoring.
NOTE:Unlimited license means that ProCurve does not impose a limit on the number of devices attached to the network as a condition of the license.
NOTE:Some degradation in performance may be expected the greater the number of devices attached to the network.
NOTE: Specifications subject to change.

Accessories

ProCurve Manager Plus 2.3 upgrade +100-device license
(J9058A)

PCM+ 2.3 +100-device license gives the customer an additional 100-device license for companies with growing managed device counts.

System requirements	For networks having 50 to 250 managed devices, ProCurve recommends the following:
Minimum system hardware	2.0 GHz Intel Pentium 4 or equivalent processor 2 GB RAM memory 10 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
For networks having 250 to 2,000 managed devices, ProCurve recommends the following:	
Minimum system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
Recommended system hardware	Intel Xeon or equivalent processor 4 GB RAM memory 80 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
Browsers	Microsoft Internet Explorer version 5.0 or later
Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
Additional requirements	NOTE: ProCurve Network Immunity Manager when loaded on PCM+ 2.3 can sample up to 500 managed ports using sFlow or XRMON.

NOTE:Additional processing power may be necessary for extensive traffic monitoring.
NOTE:Unlimited license means that ProCurve does not impose a limit on the number of devices attached to the network as a condition of the license.
NOTE:Some degradation in performance may be expected the greater the number of devices attached to the network.
NOTE: Specifications subject to change.

Accessories

ProCurve Manager Plus 2.3 unlimited-device license (J9059A) PCM+ 2.3 unlimited license provides a PCM+ license that does not limit the number of devices managed (it does NOT require the 50-device license).	**System requirements**	For networks having 50 to 250 managed devices, ProCurve recommends the following:
	Minimum system hardware	2.0 GHz Intel Pentium 4 or equivalent processor 2 GB RAM memory 10 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
	Recommended system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
	Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
	For networks having 250 to 2,000 managed devices, ProCurve recommends the following:	
	Minimum system hardware	3.0 GHz Intel Pentium 4 or equivalent processor 3 GB RAM memory 40 GB storage 1000 MB NIC for PCM+ as a standalone application, assuming a dedicated server
	Recommended system hardware	Intel Xeon or equivalent processor 4 GB RAM memory 80 GB storage 1000 MB NIC for PCM+ assuming a dedicated server, and including ProCurve Identity Driven Manager, Mobility Manager, and Network Immunity Manager on the same server
	Recommended software	Microsoft Windows 2003 Server Windows XP SP2 Windows XP Professional SP2
	Browsers	Microsoft Internet Explorer version 5.0 or later
	Supported platforms	HP OpenView Network Node Manager version 6.41 or 7.01 or 7.5
	Additional requirements	NOTE: ProCurve Network Immunity Manager when loaded on PCM+ 2.3 can sample up to 500 managed ports using sFlow or XRMON.

NOTE:Additional processing power may be necessary for extensive traffic monitoring.
NOTE:Unlimited license means that ProCurve does not impose a limit on the number of devices attached to the network as a condition of the license.
NOTE:Some degradation in performance may be expected the greater the number of devices attached to the network.
NOTE: Specifications subject to change.

Accessories

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